UNE-P Economics: Revenue Impact - Verizon

			Plus:	Plus:	Plus:	Plus:	Total	Less:	= Total
		Basic Local Service	SLC	Vertical serv.	Access/IntraLATA toll	USF	Retail Revenue	UNE-P	Revenue Lost
VZ	Connecticut	13 43	5.69	9 00	5.00	0 62	33.74	20.81	12 93
	DC	12 78	3 87	9 00	5 00	0.57	31.22	15 87	15 35
	Delaware	11 29	6.00	9 00	5.00	0 57	31 86	16 03	15 83
	Maryland	16.81	5.69	9.00	5 00	0.57	37.07	18.82	18 25
	New Jersey	7 47	6 00	9 00	5.00	0 57	28.04	12.61	15 43
	West Virginia	29 00	6 00	9.00	5.00	0 57	49.57	26 50	23 07
	Pennsylvania	11 61	6 00	9.00	5.00	0.57	32 18	15 11	17 07
	Virginia	12.64	6 00	9.00	5 00	0 57	33.21	17.07	16 14
	Maine	16 35	6 00	9 00	5.00	0 57	36.92	15 34	21 57
	Massachusetts	16 85	6 00	9 00	5 00	0 57	37 42	15 09	22 33
	New Hampshire	13 86	6 00	9 00	5 00	0 57	34 43	25 54	8 89
	New York	11 05	6 00	9 00	5.00	0 57	31 62	12 33	19 28
	Rhode Island	14 78	6.00	9 00	5.00	0 57	35 35	27 46	7 89
	Vermont	17 20	6 00	9 00	5 00	0 57	37 77	13 85	23 92
	Average/Total	**12.47**	**5.95**	**9.00**	**5.00**	**0.57**	**32.99**	**15.10**	**17.89**

	Loop			Local Switching		Tandem switching	Shared transport	
	Urban	Suburban	Rural	per port	per MOU	per MOU	per MOU	Avg. UNE-P
Connecticut	8 95	12 03	19.69	3 31	0 0072	0.0020	na	20 81
DC	10 81	10 81	10 81	1 55	0 0030	0.0010	0 0015	15 87
Delaware	10 07	13 13	16 67	2.23	0 0028	0.0007	0 0001	16 03
Maryland	12 11	12 85	25 96	1.90	0 0038	0.0007	0 0004	18 82
New Jersey	8 12	9 59	10 92	0 73	0 0026	0.0013	0 0025	12 61
West Virginia	14 99	22 04	43 44	1 60	0 0072	0.0002	0 0007	26 50
Pennsylvania	10 25	11 00	14 00	2 67	0 0017	0.0008	0 0001	15 11
Virginia	10 74	16 45	29 40	1 30	0 0031	0.0006	0 0001	17 07
Maine	11 44	13 47	18 75	0 94	0 0017	0.0022	0 0009	15 34
Massachussetts	7 54	14 11	20 04	2 00	0 0033	0.0012	0 0022	15 09
New Hampshire	14 01	15 87	24.09	2 31	0.0079	0.0016	0 0010	25 54
New York	7 70	11 31	15 51	2.57	0 0011	na	na	12 33
Rhode Island	11 19	15 44	19 13	1.86	0 0127	0.0012	0 0022	27 46
Vermont	7 72	8 35	21 63	1 03	0 0040	0 0009	0 0006	13 85
Average	**9.34**	**12.33**	**18.16**	**1.98**	**0.0026**	**0.0007**	**0.0008**	**15.10**

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UNE-P Economics: Revenue Impact - Qwest

	Basic Local Service	Plus: SLC	Plus: Vertical serv.	Plus: Access/IntraLATA toll	Plus: USF	Total Retail Revenue	Less: UNE-P	= Total Revenue Lost
Arizona	13.18	6.00	8.00	5.00	0.56	32.74	28.10	4.64
Colorado	14.92	6.00	8.00	5.00	0.56	34.48	12.88	21.60
Idaho	14.48	6.00	8.00	5.00	0.56	34.04	22.44	11.59
Iowa	11.68	4.72	8.00	5.00	0.56	29.96	17.15	12.81
Minnesota	14.36	4.89	8.00	5.00	0.56	32.81	13.45	19.36
Montana	16.73	6.00	8.00	5.00	0.56	36.29	27.34	8.95
Nebraska	19.23	5.16	8.00	5.00	0.56	37.95	25.19	12.75
New Mexico	10.66	6.00	8.00	5.00	0.56	30.22	21.74	8.48
North Dakota	17.69	6.00	8.00	5.00	0.56	37.25	22.90	14.35
Oregon	13.80	6.00	8.00	5.00	0.56	33.36	20.66	12.70
South Dakota	16.65	6.00	8.00	5.00	0.56	36.21	23.54	12.67
Utah	11.03	6.00	8.00	5.00	0.56	30.59	19.45	11.14
Washington	12.50	5.92	8.00	5.00	0.56	31.98	10.72	21.26
Wyoming	23.10	6.00	8.00	5.00	0.56	42.66	28.26	14.40
Average/Total	**13.75**	**5.75**	**8.00**	**5.00**	**0.56**	**33.06**	**18.33**	**14.73**

	Loop Urban	Loop Suburban	Loop Rural	Local Switching per port	Local Switching per MOU	Tandem switching per MOU	Shared transport per MOU	Avg. UNE-P
Arizona	18.96	34.94	56.53	1.61	0.0028	0.0014	0.0009	28.10
Colorado	5.91	12.31	32.79	1.86	0.0020	0.0020	0.0020	12.88
Idaho	15.81	24.01	40.92	1.34	0.0017	0.0032	0.0022	22.44
Iowa	13.11	15.64	27.27	1.15	0.0007	0.0042	0.0013	17.15
Minnesota	8.81	12.33	21.91	1.08	0.0018	0.0013	0.0015	13.45
Montana	23.10	23.90	27.13	1.58	0.0007	0.0068	0.0015	27.34
Nebraska	15.14	35.05	77.92	2.47	0.0007	0.0026	0.0012	25.19
New Mexico	17.75	20.30	25.23	1.38	0.0011	0.0016	0.0019	21.74
North Dakota	14.78	24.92	56.44	1.27	0.0007	0.0084	0.0044	22.90
Oregon	13.95	25.20	56.21	1.26	0.0013	0.0016	0.0000	20.66
South Dakota	17.01	18.54	24.37	1.84	0.0035	0.0017	0.0014	23.54
Utah	14.77	17.76	20.29	0.94	0.0026	0.0011	0.0009	19.45
Washington	6.41	11.35	12.76	1.34	0.0012	0.0014	0.0022	10.72
Wyoming	19.91	26.94	30.13	2.64	0.0038	0.0016	0.0003	28.26
Average	**12.17**	**19.86**	**34.72**	**1.46**	**0.0017**	**0.0020**	**0.0014**	**18.33**

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UNE-P Economics: Calculating the Impact

2) Estimated Average *Retail* COGS and SG&A per Line Based on Existing Wireline EBITDA Margins

— Assumes residential wireline margins are equivalent to total wireline margins

3) Calculated Wholesale EBITDA Contribution

— a) Estimated average wholesale COGS and SG&A per line

- Assume 5% avoided cost in COGS; 20% avoided cost in SG&A

— b) Compared this cost structure to revenue from wholesale UNE-P rates

	COGS (% of sales)	S,G&A (% of sales)	EBITDA margins	% of COGS avoided	% of S,G&A avoided	Calculated EBITDA margins
SBC	35%	25%	40%	5%	20%	-24%
VZ	31%	24%	45%	5%	20%	-4%
BLS	27%	23%	50%	5%	20%	13%

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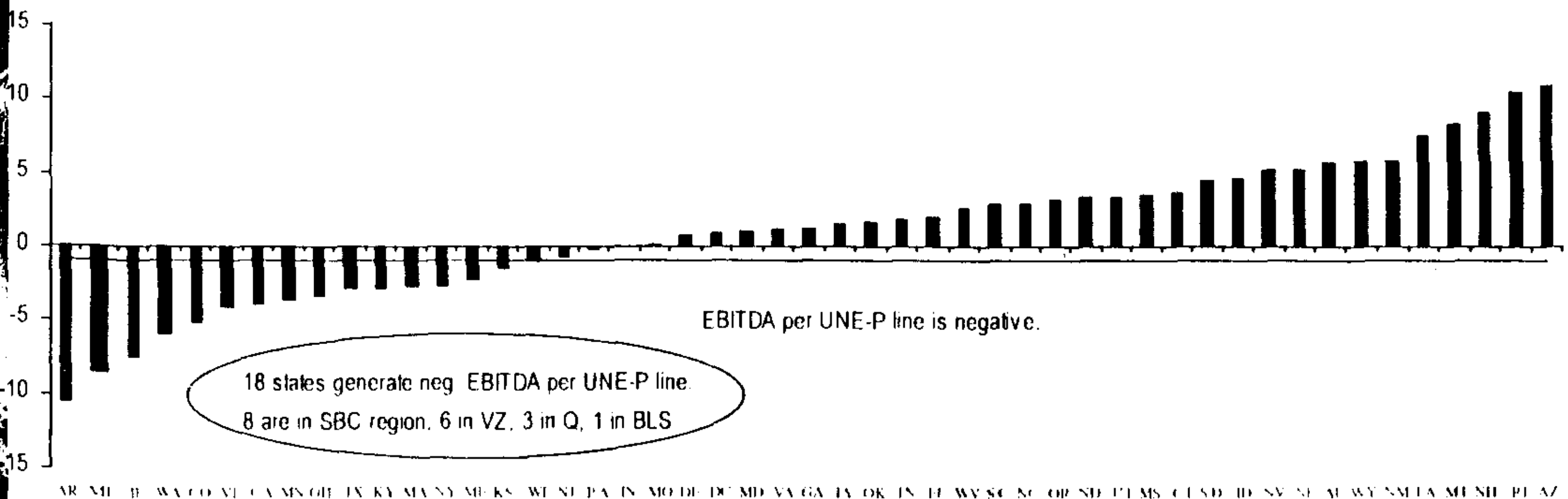
UNE-P Economics: Calculating the Impact

- **EBITDA Per Line**
  - SBC - UNE-P Average ($3.51) vs. Retail Average $13.53
  - BellSouth - UNE-P Average $2.47 vs. Retail Average $18.12
  - Verizon - UNE-P Average ($0.68) vs. Retail Average $14.59
  - Qwest - UNE-P Average $1.03 vs. Retail Average $14.69



Source: UBS Warburg LLC and company reports

UBS Warburg

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UNE-P Economics: Profitability Impact - SBC

	Retail Profitability				Wholesale Profitability							
	COGS	Gross Profit	S,G&A exp.	EBITDA	COGS 95% of ret COGS	Gross Profit	S,G&A exp. 80% of ret S,G&A	EBITDA	EBITDA lost	EBITDA Lost/ Revenue Lost	FCF lost	FCF Lost/ Revenue Lost
Illinois	10 85	20 14	7 75	12 40	10 30	-1 39	6 20	-7 58	19 98	89 0%	13 39	60%
Indiana	[illegible] 20	20 79	8 00	12 80	10 64	6 44	6 40	0 04	12 76	83 2%	8 55	56%
Michigan	14 11	26 20	10 08	16 12	13 40	-0 67	8 06	8 73	24 85	88 7%	16 65	59%
Ohio	11 76	21 84	8 40	13 44	11 17	3 24	6 72	-3 48	16 92	86 3%	11 34	58%
Wisconsin	13 64	25 34	9 75	15 59	12 96	6 72	7 80	1 08	16 67	85 3%	11 17	57%
California	10 28	19 09	7 34	11 75	9 77	1 91	5 87	3 96	15 71	86 6%	10 52	58%
Connecticut	11 28	20 95	8 06	12 89	10 72	10 09	6 45	3 64	9 25	76 8%	6 70	51%
Nevada	10 50	19 51	7 50	12 00	9 98	11 19	6 00	5 19	6 82	72 7%	4 57	49%
Arkansas	17 90	33 25	12 79	20 46	17 01	-0 44	10 23	10 67	31 13	88 8%	20 86	59%
Kansas	11 78	21 87	8 41	13 46	11 19	5 20	6 73	-1 53	14 99	84 5%	10 04	57%
Missouri	12 64	23 47	9 03	14 44	12 00	7 36	7 22	0 14	14 30	83 1%	9 58	56%
Oklahoma	11 02	20 46	7 87	12 59	10 47	7 98	6 30	1 68	10 91	80 7%	7 31	54%
Texas	13 70	25 45	9 79	15 66	13 02	4 89	7 83	2 94	18 60	85 6%	12 46	57%
Average/Total	**11.83**	**21.98**	**8.45**	**13.53**	**11.24**	**3.25**	**6.76**	**-3.51**	**17.04**	**85.7%**	**11.41**	**58%**
Avg. Ameritech	**12.16**	**22.58**	**8.69**	**13.90**	**11.55**	**1.85**	**6.95**	**-5.10**	**18.99**	**87.4%**	**12.73**	**59%**

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UNE-P Economics: Profitability Impact - BellSouth

	Retail Profitability				Wholesale Profitability							
	COGS	Gross Profit	S,G&A exp.	EBITDA	COGS 95% of rel. COGS	Gross Profit	S,G&A exp. 80% of rel. S,G&A	EBITDA	EBITDA lost	EBITDA Lost/ Revenue Lost	FCF lost	FCF Lost/ Revenue Lost
Alabama	10.48	28.32	8.92	19.40	9.95	12.86	7.14	5.73	13.67	83.0%	9.04	55%
Florida	9.05	24.46	7.71	16.75	8.59	8.10	6.15	1.93	14.82	85.6%	9.79	57%
Georgia	10.79	29.16	9.19	19.98	10.25	8.55	7.35	1.20	18.78	86.8%	12.41	57%
Kentucky	11.04	29.86	9.41	20.45	10.49	4.63	7.53	2.89	23.34	88.9%	15.43	59%
Louisiana	9.49	25.65	8.08	17.57	9.01	14.06	6.47	7.60	9.97	79.4%	6.59	52%
Mississippi	11.21	30.30	9.55	20.76	10.65	11.12	7.64	3.48	17.27	85.4%	11.41	56%
North Carolina	9.64	26.05	8.21	17.85	9.15	9.54	6.57	2.97	14.87	85.1%	9.83	56%
South Carolina	10.13	27.40	8.63	18.77	9.63	9.80	6.91	2.89	15.87	85.4%	10.49	56%
Tennessee	9.36	25.29	7.97	17.33	8.89	8.29	6.38	1.91	15.41	85.8%	10.18	57%
Average/Total	**9.78**	**26.45**	**8.33**	**18.12**	**9.29**	**9.13**	**6.67**	**2.47**	**15.65**	**85.3%**	**10.34**	**57%**

UBS Warburg

UNE-P Economics: Profitability Impact - Verizon

	Retail Profitability				Wholesale Profitability							
	COGS	Gross Profit	S,G&A exp.	EBITDA	COGS 95% of ret. COGS	Gross Profit	S,G&A exp. 80% of ret. S,G&A	EBITDA	EBITDA lost	EBITDA Lost/ Revenue Lost	FCF lost	FCF Lost/ Revenue Lost
Connecticut	10.27	22.85	7.95	14.90	9.75	11.05	6.36	4.69	10.21	78.9%	6.75	52%
DC	9.50	21.15	7.36	13.79	9.03	6.84	5.88	0.96	12.84	83.6%	8.48	55%
Delaware	9.70	21.59	7.51	14.08	9.21	6.81	6.01	0.80	13.28	83.9%	8.77	55%
Maryland	11.32	25.19	8.76	16.43	10.75	8.07	7.01	1.06	15.37	84.2%	10.15	56%
New Jersey	8.52	18.95	6.59	12.36	8.09	4.52	5.27	-0.75	13.11	85.0%	8.67	56%
West Virginia	15.19	33.81	11.76	22.05	14.43	12.07	9.41	2.66	19.39	84.0%	12.81	56%
Pennsylvania	9.80	21.81	7.59	14.22	9.31	5.81	6.07	0.26	14.49	84.9%	9.57	56%
Virginia	10.12	22.52	7.83	14.69	9.61	7.45	6.27	1.19	13.50	83.6%	8.92	55%
Maine	11.27	25.08	8.72	16.36	10.70	4.64	6.98	-2.34	18.69	86.7%	12.35	57%
Massachusetts	11.42	25.43	8.84	16.58	10.85	4.24	7.08	-2.84	19.42	87.0%	12.83	57%
New Hampshire	10.50	23.36	8.13	15.23	9.97	15.57	6.50	9.07	6.17	69.4%	4.08	46%
New York	9.62	21.42	7.45	13.97	9.14	3.19	5.96	2.77	16.74	86.8%	11.06	57%
Rhode Island	10.78	24.00	8.35	15.65	10.24	17.22	6.68	10.54	5.11	64.8%	3.38	43%
Vermont	11.53	25.67	8.93	16.74	10.96	2.89	7.14	-4.25	20.99	87.7%	13.87	58%
Average/Total	**10.05**	**22.37**	**7.78**	**14.59**	**9.55**	**5.55**	**6.22**	**-0.68**	**15.26**	**85.3%**	**10.09**	**56%**

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UNE-P Economics: Profitability Impact - Qwest

	Retail Profitability				Wholesale Profitability							
	COGS	Gross Profit	S,G&A exp.	EBITDA	COGS 95% of ret COGS	Gross Profit	S,G&A exp. 80% of ret S,G&A	EBITDA	EBITDA lost	EBITDA Lost/ Revenue Lost	FCF lost	FCF Lost/ Revenue Lost
Arizona	11.26	20.92	8.05	12.87	10.70	17.40	6.44	10.97	1.91	41.1%	1.05	23%
Colorado	11.87	22.05	8.48	13.57	11.28	1.60	6.78	5.19	18.75	86.8%	10.31	48%
Idaho	11.72	21.76	8.37	13.39	11.13	11.31	6.70	4.62	8.77	75.7%	4.83	42%
Iowa	10.29	19.11	7.35	11.76	9.78	7.38	5.88	1.50	10.26	80.1%	5.64	44%
Minnesota	11.29	20.96	8.06	12.90	10.72	2.72	6.45	3.73	16.63	85.9%	9.14	47%
Montana	12.51	23.22	8.93	14.29	11.88	15.46	7.15	8.32	5.97	66.8%	3.29	37%
Nebraska	13.08	24.30	9.35	14.95	12.43	12.76	7.48	5.29	9.67	75.8%	5.32	42%
New Mexico	10.38	19.28	7.42	11.86	9.86	11.88	5.93	5.95	5.91	69.8%	3.25	38%
North Dakota	12.84	23.85	9.17	14.68	12.20	10.70	7.34	3.36	11.31	78.8%	6.22	43%
Oregon	11.48	21.32	8.20	13.12	10.91	9.75	6.56	3.19	9.93	78.2%	5.46	43%
South Dakota	12.48	23.17	8.91	14.26	11.85	11.69	7.13	4.56	9.70	76.6%	5.33	42%
Utah	10.51	19.52	7.51	12.01	9.98	9.46	6.01	3.46	8.56	76.8%	4.71	42%
Washington	11.00	20.42	7.86	12.57	10.45	0.28	6.28	-6.01	18.57	87.4%	10.22	48%
Wyoming	14.74	27.37	10.53	16.84	14.00	14.26	8.42	5.84	11.00	76.4%	6.05	42%
Average/Total	**11.38**	**21.13**	**8.13**	**13.00**	**10.81**	**7.53**	**6.50**	**1.03**	**11.98**	**81.3%**	**6.59**	**45%**

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UNE-P Economics: Calculating the Impact

- **4) Estimated Future Line Loss in Each State**
  - **SBC**: Lost 692K lines to UNE-P in 2Q, up from 358K in 1Q
    - We believe roughly half of these were in June alone
    - AT&T entered IL and OH in mid-June, CA in early August
    - We expect line loss of 1m in Q3 and 1.2m in Q4
  - **BellSouth**: Lost 278K lines to UNE-P in 2Q, up from 239K in 1Q
    - Losing 100-120/ quarter to reseller in Florida
    - AT&T in Georgia and is likely to enter Florida as well
    - We expect line loss of 300K in Q3 and 400K in Q4
  - **Verizon**: Lost 110K lines to UNE-P in 2Q, up from 64K in 1Q
    - AT&T increasing marketing expenditures in New York
    - Announced entry into New Jersey in September
    - Expect to enter Pennsylvania in 4Q
    - We expect line loss of 230K in Q3 and 500K in Q4

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UNE-P Economics: UNE-P Line Projections

	1Q01	2Q01	3Q01	4Q01	1Q02	2Q02	3Q02e	4Q02e	2000	2001	2002e	2003e	2004e	2005e
Total Switched Access Lines														
SBC	61,254	60,578	60,230	59,532	59,036	58,255	57,325	56,345	61,270	59,532	56,345	54,349	53,676	53,271
VZ	62,903	62,465	61,967	61,551	61,227	60,373	58,027	57,276	62,902	61,551	57,276	55,131	54,129	53,972
BLS	25,898	25,666	25,575	25,422	25,425	25,138	24,837	24,612	25,908	25,422	24,612	24,080	23,920	23,776
Q	17,929	17,808	17,687	17,454	17,250	16,955	16,730	16,531	18,089	17,454	16,531	15,686	15,072	14,611
Total	**167,984**	**166,517**	**165,459**	**163,959**	**162,938**	**160,721**	**156,920**	**154,764**	**168,169**	**163,959**	**154,764**	**149,246**	**146,797**	**145,630**
% growth														
SBC	0.2%	1.1%	1.7%	-2.8%	-3.6%	-3.8%	-4.8%	-5.4%	0.9%	-2.8%	-5.4%	-3.5%	-1.2%	-0.8%
VZ	0.6%	0.4%	-1.4%	-2.1%	-2.7%	-3.3%	-6.4%	-6.9%	1.4%	-2.1%	-6.9%	-3.7%	-1.8%	-0.3%
BLS	0.1%	0.8%	1.4%	-1.9%	-1.8%	-2.1%	-2.9%	-3.2%	1.6%	1.9%	-3.2%	-2.2%	-0.7%	-0.6%
Q	0.1%	0.8%	1.9%	-3.5%	-3.8%	-4.8%	-5.4%	-5.3%	1.9%	-3.5%	-5.3%	-5.1%	-3.9%	-3.1%
Total	**0.3%**	**-0.7%**	**-1.6%**	**-2.5%**	**-3.0%**	**-3.5%**	**-5.2%**	**-5.6%**	**1.3%**	**-2.5%**	**-5.6%**	**-3.6%**	**-1.6%**	**-0.8%**
Total UNE-P														
SBC	1,373	1,760	2,159	2,403	2,761	3,453	4,453	5,653	1,012	2,403	5,653	9,067	10,798	11,852
VZ	1,645	2,093	2,138	2,195	2,259	2,369	2,599	3,099	1,687	2,195	3,099	4,899	6,299	7,299
BLS	303	385	505	601	840	1,118	1,418	1,818	224	601	1,818	3,318	4,218	4,818
Q	431	451	459	453	491	512	547	582	na	453	582	862	1,052	1,167
Total	**3,752**	**4,689**	**5,261**	**5,652**	**6,351**	**7,452**	**9,017**	**11,152**	**2,923**	**5,652**	**11,152**	**18,146**	**22,367**	**25,136**
Net UNE-P Adds														
SBC	361	387	399	244	358	692	1,000	1,200	na	1,391	3,250	3,414	1,731	1,055
VZ	42	448	45	57	64	110	230	500	na	508	904	1,800	1,400	1,000
BLS	79	82	120	96	239	278	300	400	na	377	1,217	1,500	900	600
Q	na	20	8	6	38	21	35	35	na	na	129	280	190	115
Total	**398**	**937**	**572**	**391**	**699**	**1,101**	**1,565**	**2,135**	**na**	**2,276**	**5,500**	**6,994**	**4,221**	**2,770**
UNE-P Penetration														
SBC	2.2%	2.9%	3.6%	4.0%	4.7%	5.9%	7.8%	10.0%	1.7%	4.0%	10.0%	16.7%	20.1%	22.2%
VZ	2.6%	3.4%	3.5%	3.6%	3.7%	3.9%	4.5%	5.4%	2.7%	3.6%	5.4%	8.9%	11.6%	13.5%
BLS	1.2%	1.5%	2.0%	2.4%	3.3%	4.4%	5.7%	7.4%	0.9%	2.4%	7.4%	13.8%	17.6%	20.3%
Q	2.4%	2.5%	2.6%	2.6%	2.8%	3.0%	3.3%	3.5%	na	2.6%	3.5%	5.5%	7.0%	8.0%
Total	**2.2%**	**2.8%**	**3.2%**	**3.4%**	**3.9%**	**4.6%**	**5.7%**	**7.2%**	**1.7%**	**3.4%**	**7.2%**	**12.2%**	**15.2%**	**17.3%**

UBS Warburg

UNE-P Economics: What's the Call?

- **Downgrading the Bells (BLS, SBC and VZ)**
  - Expect the group to perform inline with the market over the next 12 months
  - Dividend yields should provide a backstop on valuations
- **Economics of UNE-P worse than expected for the Bells**
  - Will put additional pressure on Bell margins and earnings
  - SBC and BellSouth are the most exposed
- **Line Losses Will Likely Accelerate in 2H02**
  - AT&T and MCI
  - No near-term regulatory relief expected
- **Long Distance is Only a Partial Offset**
  - Local revenue is much higher margin than long distance
  - To breakeven on the EBITDA line, Bells need to add 5.4 long distance customers for every UNE-P line added
- **2003 EPS Estimates are Too High**
  - We now expect 2003 EPS to decline 1.8%; the Street still forecasts growth

Additional information available upon request.
Prices of companies mentioned as of :

AT&T Corp	2	T	N/A
BellSouth Corp	2	BLS	N/A
Qwest Communications International		Q	N/A
SBC Communications, Inc.	2	SBC	N/A
Sprint FON Group	2	FON	N/A
Verizon Communications	2,57	VZ	N/A
WorldCom Group	1,2	WCOM	N/A

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UBS Warburg

United States
Telecom Services

21 August 2002

Dresdner Kleinwort Wasserstein Research

UNe-P: the Un-Profit

Regulation pressuring RBOC profits

Industry update

Hold

BellSouth Corporation
Qwest Communications
SBC Communications
Verizon Communications

RBOCs' core profit center is under severe attack from competitive forces. Regulators have reduced UNE pricing such that CLECs are using UNE lines to penetrate the residential and small business markets. In our view, until UNE pricing becomes more rational, the RBOCs will suffer steeper profitability squeezes from CLECs using UNE lines.

- **CLEC penetration rising:** By the end of 2001, according to the FCC, CLECs accounted for 10.2% of the nation's 192m switched lines, up from 7.7% 12 months earlier, a 32% increase in market share. Cable telephony lines are increasing at a slightly faster rate than overall CLEC lines. By the end of 2001, according to the FCC, cable telephone lines constituted 11% of CLEC lines (2.2m lines), and 1% of all switched lines.
- **Lost ILEC profits:** ILECs lost 1.5m lines in the last six months of 2001 in the form of UNEs (unbundled network elements) to CLECs, which we estimate comes to $1bn in lost annualized sales, most of which is pure profit. In a six-month span, then, after taxes, ILEC bottom lines lost about $325m in net income, and $4.2bn in market capitalization, assuming a 13x P/E multiple. The Bells control about 94% of the nation's incumbent access lines, so the RBOCs, primarily through UNE, lost $4bn in market capitalization in the last half of 2001. The Bells currently have a $220bn equity market cap, meaning that CLECs conceivably destroyed 2% of Bell equity value in the H2 2001.
- **Some CLEC overbuilding:** In H2 01, CLECs gained 2.4m lines, which we believe was created exclusively at the expense of the ILECs, or 19,000 lines per business day. Some of these lines are lost to cable telephony or where CLECs build their own connections directly to businesses. In such cases, the CLEC has overbuilt, or completely severed the connection between the ILEC and the customer, removing the ILEC from 100% of their former revenue stream.
- **Ratings:** We maintain our Hold ratings on BellSouth Corp., Qwest Communications, SBC Communications and Verizon Communications.

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Investment summary and conclusion

Regulators are forcing unprofitable resale pricing upon the local industry through UNEs

The concern isn't the CLECs: with a weak capital market, and the techno bubble-burst, the money CLECs need to build out a local network IS NOT available in the public or bank markets. Ironically, the impact of CLEC competition has never been more NEGATIVE for RBOCs (we interchange the terms RBOCs and ILECs). Why? Because the regulators are forcing unprofitable resale pricing upon the local industry through Unbundled Network Elements, or UNEs. What are UNEs?

UNEs are network 'elements' – switching, copper lines, data base hookups, fiber trunks into office buildings, etc., that the RBOC is forced to lease to the CLEC. When a CLEC uses UNEs INSTEAD of building out its own copper loops, switches, etc., it avoids major capital expense, and 'rides' the RBOCs' investments made over decades. When capital flowed freely to CLECs in the 1990s, CLECs took that money and decided to build their own networks. At the time that seemed to be a rational decision: money would be available from Wall Street 'forever', and an owned network would be more profitable than a leased one – eventually. Unfortunately for those CLECs that overbuilt over wide geographic territories, i.e., the "XOs" of the world that decided there was a business case for a 'national – local' infrastructure that served (in retrospect) way too many cities, thereby never achieving density – the key to local profitability – the capital markets dried up. Left, were the liquid competitors to the Bells; AT&T and MCI (until now), who, over the last two years, have taken up UNE, or leasing, rather than constructing a second local network, as the means to compete. WHY?

AT&T and MCI are very concerned about losing long distance customers to the RBOCs. So even if UNE isn't as profitable as owning your own network, by being able to offer local service promptly (which UNE enables) and at a decent profit (which UNE enables), the long distance carriers can combat long distance customer defection, making THEIR foray into leasing local services more profitable by avoiding lost long distance revenues, than an "XO" could have.

- Hence, the recent rapid entry into long distance by the RBOCs has been accompanied by a rapid expansion of the use of UNEs by CLECs, principally AT&T and MCI.

- States rule over the Feds on local telephony. States have been widening the UNE discount – to the detriment of the RBOCs – as a quid pro quo to RBOC long distance entry. Local profit margins are much fatter (45%) than long distance margins (25%), so the current trade-off is a loser for the RBOCs.

- The discount has caused much more rapid CLEC UNE use. This was seen most recently in California, where the CA PUC has recently ruled that SBC can provide long distance (SBC still must apply at the FCC). In the case of CA, AT&T got lower UNE rates BEFORE SBC was able to get into long distance, causing a timing-engendered loss as well.

Which regulators? Well, first the FCC, which took the 1996 Act that did not specify particular UNEs or what price they should be made available at. The last FCC made a long list of UNEs and set severe discount 'frameworks' to those UNEs. Then the states got into the act by setting the actual UNE rate, i.e., the discount from retail rates offered to an RBOC's customers. These discounts can be as high as 65%! At the margin, such revenue loss, accompanied by continued network costs, results in almost one-for-one profit loss – **thus, the UNE is highly profit-destructive**.

The regulators may allow three to four vertically and horizontally integrated providers

The only saving grace is that MCI has serious financial difficulties, and could be forced to abandon its UNE expansion program – to the Bells' benefit. In addition, AT&T, which is in much better financial shape, and can, we estimate, survive on its own for years, could be bought out by a Bell if the current telecom meltdown continues. In other words, the regulators – the FCC and DOJ – may allow the oligopolization of the telecom industry, where there are three to four vertically and horizontally integrated providers. That is, three to four old Ma Bells.

- For investors, we believe that the Bells are trading near historically low multiples of EBITDA, which is the most important barometer of value, in our view. However, UNE is, at the margin, so value destructive, that we would be HOLDERs, if and until the regulators become more realistic. And if they don't, shareholders might be rewarded by a severe downsizing of MCI and/or absorption of AT&T by a Bell. **Conclusion: Hold**

"The cream skim" – business, population density and demographics

The current competitive policies favor rich residential customers, large businesses and states with greater population density.

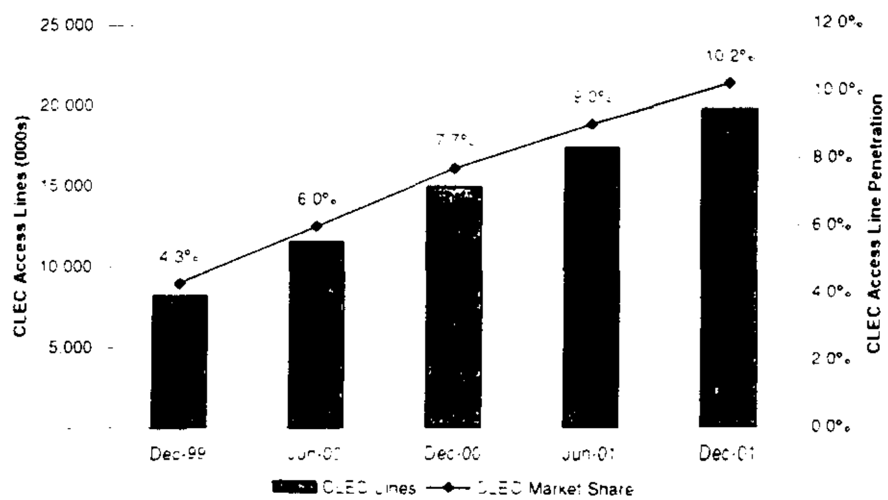
45 of CLEC lines served residential and small business markets

According to the FCC, 55% of CLEC lines served medium and large businesses and government customers. In contrast, just 23% of ILEC lines served such customers. **Conversely, 45% of CLEC lines served residential and small business markets, while over 75% of Bell lines served lower profit residential and small business lines.** Businesses and government offices are more densely packed, and spend more per access line than residents.

Thus, the ILECs are left holding the 'bag' – serving more of the costly (read: geographically dispersed) and lower paying line base. We view the 'cream skim' as one of the most compelling arguments that local competition regulation is destructive and illogical.

Year-end 2001E CLEC line composition

Figure 1: CLEC access lines, 1999-2001



Source: FCC

Overbuild: 33%, but in key sectors much lower

The goal of the 1996 Act was to create the environment for local competition, not create local competition

Of the 33% overbuild percentage, we estimate that under 5% of residential lines are overbuilt lines. We believe this is a *telling* statistic and perhaps the most important in this report. In the US at year-end 2001, there were 134m residential and small business access lines. The majority of overbuilt lines are business lines, with a concentration on medium and large sized businesses. Our view is that the current rules forcing RBOCs to resell local lines to CLECs at very deep discounts are off course. **The goal of the 1996 Act was to create the environment for local competition, not create local competition.** Although seemingly subtle, this is a huge distinction. The idea is that to produce new, exciting services and pricing programs requires a competitor to provide new, exciting services. How can that occur if the CLEC is reselling the RBOCs' service? With only a 33% overbuilding rate, the desired outcome of the Act is unaccomplished. The idea was to give the CLECs a means to build customer scale upon which they could then justify building their own network, since this is an industry of scale. In point of fact, the growth in UNE lines is accelerating, despite the fact that the base of CLEC customers is also expanding. With UNE, the CLECs are merely behaving as rational decision makers. If it's cheaper and less risky to resell rather than build, then resell is the answer. Unlike the long distance industry, which is less of a natural monopoly since it takes just severalbn dollars and two to three years to build a national network, except for the cream of the business market and the cream, i.e., demographically desirable (read: rich homeowners who can buy many services) residential market, a new national local network is unlikely to emerge. We won't get into "what ifs," but under a more rational local competitive framework, overbuilding might have occurred to a greater extent.

Sinking the sunk costs

Cable telephony penetration is increasing even faster than overall CLEC penetration

Overbuilding erases any revenue contribution from former customers or prospective customers that would have used a Bell if an overbuilding CLEC wasn't around. It fully 'strands' the lines' assets. The business base is easier to overbuild because they are located in office buildings and otherwise packed more densely. So the 'cream skim' has been accompanied by the 'overbuild'. That is, for years, CLECs such as Time Warner Communications, AT&T Business and WorldCom's MFS (although we believe one of WCOM's downfall was its inability to leverage the MCI long distance base and 'backsell' an MFS local product into it) have been building their own trunks into business locations, either fully bypassing the ILEC, or perhaps renting minimal network subsegments such as the last link into a building. Now, cable telephony is copying the CLECs on the residential side. By piggybacking onto the cable television network, they found an economical way to overbuild the less dense residential base, a danger to the Bells that have concerned us for some time. FCC statistics show cable telephony penetration increasing even faster than overall CLEC penetration, and AT&T Broadband reported in Q2 02 that, for the first time, its cable telephony operations are EBITDA-positive, validation that a means to 'crack' the natural monopoly in the local residential market exists. It still takes a lot longer to deploy a cable telephony line than a UNE line. Thus, cable telephony is probably impacting residential lines' margins, but not taking significant market share yet.

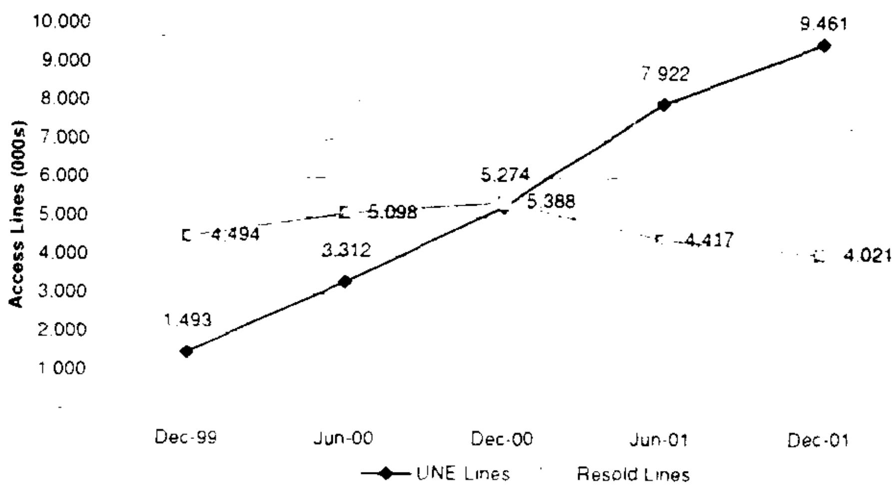
The bottom line is that competition comes in two flavors: reselling the RBOCs' network, or overbuilding. The Bells argue that low UNE rates, which can force an RBOC to resell a local line to a CLEC such as MCI "Neighborhood" for as much as 70% off of retail, aren't so bad because they at least provide some revenue across a high fixed cost structure. Also, since the line is deployed already (**sunk cost**), and only minimal cash is required to operate that line, an RBOC would select UNE to overbuilding as the lesser of two evils. We agree. However, with overbuilding now taking place in the business and residential ends of the local market, we expect that the value of the RBOCs' plant, i.e., their sunk costs, are falling, **and that plant write downs loom.** Again, the overbuilding is concentrating in the large business arenas and will occur for plant that serves large businesses, not the residential market.

Resale: 22%, down from 43% two years earlier

UNE-P lines add 20 -40 points of gross margin to a CLEC

Resale is uneconomical for CLECs, so they are dropping resale lines or changing them to a UNE-P "lines" regime, which are functionally equivalent, but add 20%-40% points of gross margin to a CLEC.

Figure 2: UNE vs. resold lines, 1999-2001



Source: FCC

UNE: 47% (24% at YE 1999) – erased 2% of bell equity?

UNE-P has made it possible for AT T and MCI to compete in the residential arena

The UNE platform is growing rapidly in use. To the CLEC the only difference between reselling and UNEs is the cost. In fact, UNE is nothing more than resale with 2-3x the discount, which comes to a 35%-60% discount. UNE-P has made it possible for AT&T and MCI to compete in the residential arena. Because it is too costly to build out less dense residential networks, UNE-P resale (and cable telephony overbuilding) are being used to penetrate the residential and small business market. According to the FCC, CLECs served 4.6% of those markets at the end of 2000, and 6.6% of such markets by year-end 2001. There were 9.5m UNE loops at year-end 2001, **up from 8m six months earlier**. About 61%, or 5.8m lines, were UNE-P lines that included switching, and the rest (3.7m) were UNE loops, where the CLEC just leases the copper loop, and provides the other network elements. UNE-Loops cause the largest revenue loss under the local wholesale scheme. However, UNE loop sales should ameliorate, in our view.

ILECs lost 1.5m lines in the last six months of 2001 in the form of UNEs to CLECs, which we estimate comes to $1bn in lost annualized sales, most of which is pure profit. In a six-month span, then, after taxes, ILEC bottom lines lost about $325m in net income, and $4.2bn in market capitalization, assuming a 13x P/E multiple. The Bells control about 94% of the nation's incumbent access lines, so the RBOCs, primarily through UNE, lost $4bn in market capitalization in the last half of 2001. The Bells currently have a $220bn equity market cap, meaning that CLECs conceivably destroyed 2% of Bell equity value in the second half of 2001, assuming our estimates are reasonable and that the market actually "made" this observation and factored it into stock prices. There's no assurance RBOC stocks didn't decline due to other reasons, and that the UNE-P issue has yet to be factored into the stocks.

Case study: AT&T UNEs

The UNE-P platform will be instrumental in enabling AT T to reach its goal of 10bn in annual business local revenues in five years

AT&T's new senior management states that the UNE-P platform is expected to be as successful in penetrating the business market as it has been in the residential market. Today, T has some 3.2m local lines, of which 500,000, or 15%, are UNE-P-based. That percentage will increase. We estimate that the UNE-P platform will be instrumental in enabling AT&T to reach its goal of $10bn in annual business local revenues in five years. Note: it takes T about two years for UNE-P, on its own, to breakeven, excluding the positive impacts of bundling long distance with UNE-P.

From a macroeconomic point of view there are several concerns with the UNE-P system:

- It's a policy-stimulated transfer of wealth (from shareholders and employees to consumers), rather than being left to market forces.
- In the longer-term, it could rob consumers of advanced services that require the RBOCs' plentiful cash flow to fund.
- Asset write-downs will cause 'stock-shock' and a shock to the telecom 'supplier' system.

UNE is a creation of the prior FCC administration. Only network elements such as switching, local loop costs and other various network elements were required under the 1996 Act to be sold at reasonable discounts to the CLEC. The FCC decided that the ILECs were required to "rebundle" these elements and sell them at much steeper discounts than plain resale. Plain resale was required by the Act as well. The price was to be the retail price charged by the Bell less avoidable costs such as selling costs. That was interpreted to mean a 20%-25% discount to retail. However, the CLECs didn't have any margin left over for a profit. We're not sure, however, that profit was required by the Act. At the end of the day, the spirit of the Act was to deliver a mechanism to jumpstart local competition, and we interpret that to mean to develop a mechanism to allow competitors to build up a large enough base of customers – either through UNE elements or resale to THEN justify building their own network.

Regulators forgot to notice that wireless is local competition, too

In its July 2002 Local Telephone Competition report, the FCC reported that US wireless subscribers increased from 79.7m at year-end 1999 to 122.4m by year-end 2001, or a 23.9% CAGR. With wireless carriers offering big bucket minute plans including features like Caller ID and free roaming, wireless phones are replacing landlines for many consumers. As wireless companies continue to build out their networks and improve service quality, wireless displacement will increasingly displace RBOC landlines.

Wireless displacement is not only affecting primary access lines, but is having a devastating effect on RBOC second lines

Wireless displacement is not only affecting primary access lines, but is having a devastating effect on RBOC second lines. Second line growth for the RBOCs is declining rapidly, primarily as a result of wireless displacement of these second lines. For example, BLS reported a Q2 02 second line YoY growth decline of 10.6%, while SBC's second lines declined 8.7% YoY in Q2 02. Historically, second lines have increased as much as 15%-20% YoY, and just two quarters ago we estimate that these second line were declining approximately 5%. If we estimate that the RBOCs combined for 17m second lines at year-end 2001, and each second line generates $5 per month with a 65% EBITDA margin, then $633m of EBITDA was generated from RBOC second lines in 2001. This $633m of EBITDA is in danger of being reduced by 10% per year, primarily due to wireless displacement.

End result

$1.4bn decline over last year

Figure 3: RBOC local wireline

Revenues ($000s)	Q1 01	Q2 01	Q3 01	Q4 01	Q1 02	Q2 02
VZ	10 920	10 953	10 666	10 539	10 474	10 468
YoY growth	2.9%	0.3%	-1.9%	3.6%	-4.1%	-4.4%
SBC	10 113	10 334	10 201	10 043	9 781	9.737
YoY growth	5.0%	3.6%	1.0%	1.5%	3.3%	5.8%
BLS	4 612	4 722	4 733	4 757	4 614	4 586
YoY growth	3.0%	3.6%	4.6%	4.4%	0.0%	-2.9%
Q	3 577	3 620	3 637	3 706	3 468	3 434
YoY growth	na	na	na	na	3.0%	5.1%
Total	29 222	29 629	29 237	29 045	28 337	28.225
YoY growth	3.7%	2.2%	0.4%	-1.3%	-3.0%	-4.7%

Source: Verizon, SBC Communications, Qwest, BellSouth

Regulators hurting consumers in long run

Regulators have moved to an active stance to redesign the industry

The combination of very effective lobbying on the part of small and large (read: AT&T) CLECs, and a democratic FCC (thought to be friendly to long distance and CLECs, not RBOCs) prodded the FCC to create the UNE-Platform, or UNE-P. The FCC decided that UNEs should be priced at a theoretical level, that is, what would it cost for a brand new local network to add an access line. The assumptions include state-of-the-art networks throughout, and perfect capital and man-hour deployments. In other words, we believe these are imaginary, non-historic; therefore, in our opinion, this is an unreasonable way to regulate an industry. Another related issue is that of regulation altogether. In the 10 years of covering this industry, regulators have, in our view, taken an exponentially more involved role in the "day-to-day" decisions about pricing, mergers, service offerings, inter-carrier relationships, etc. than *before* the 1996 Act. It wasn't supposed to turn out that way. Regulators have moved to an active stance to redesign the industry, from a passive stance where carriers knew the rules and operated *freely* within them. They knew what their returns would be, and didn't have to make the very risky types of investments RBOCs have made in the past few years to compensate for the loss of growth in the core business that has destroyed shareholder value. On top of that the regulators have had the nerve to regulate the newer high-risk capital return projects such as DSL. Now every carrier move is scrutinized by a state or FCC hearing, slowing down the communications revolution of the late 1990s. In the short run, the consumer wins with these artificially lowered local rates. In the long term, the consumer will suffer as ILECs cut their capital budgets by 30%, which will produce fewer services, more network outages, and crummier customer service. The regulators don't understand that the local industry, unlike the long distance industry, is the closest thing in telecoms to a "natural" monopoly. Wireless, long distance and undersea networks cost less per DS-0 to build, and are constructed in a matter of months or a year or two, not the many years it takes to build a local landline network.

Figure 4: Dresdner Kleinwort Wasserstein RBOCs earnings universe

Rating	Company	Symbol	Price (US$) 20 Aug.	Target price (US$)	Fiscal year	52 week (US$) High	52 week (US$) Low	Earnings per share (US$) 2001A	Earnings per share (US$) 2002E	Earnings per share (US$) 2003E	Qtrly. EPS (US$) Yr. ago	Qtrly. EPS (US$) Curr. est.	P/E ratio (x) 2001A	P/E ratio (x) 2002E	P/E ratio (x) 2003E	Est. 5-yr gr. rate (%)	Ind div (US$)	Yield (%)	Mkt cap. (US$m)
Hold	BellSouth Corp	BLS	$25.50	$28.00	Dec	$42.95	$20.10	$2.21	$2.15	$2.23	$0.59	$0.53	11.5x	11.9x	11.4x	NA	$0.80	3.1%	$46,076
Hold	Qwest Communications	Q	$2.95	$2.00	Dec	$24.00	$1.07	$0.05	-$0.52	-$0.40	$0.08	$0.15	59.0x	NM	NM	NA	$1.54	52.2%	$4,628
Hold	SBC Communications (1)	SBC	$27.68	$28.00	Dec	$47.50	$22.20	$2.35	$2.31	$2.41	$0.59	$0.55	11.8x	12.0x	11.5x	NA	$1.08	3.9%	$88,949
Hold	Verizon Communications (1)	VZ	$31.80	$38.00	Dec	$55.99	$26.01	$3.00	$3.06	$3.15	$0.75	$0.78	10.6x	10.4x	10.1x	NA	$1.54	4.8%	$80,874

(1) Mr. Roberts has a long position in the common shares of this security

Source: First Call, Reuters, DrKW estimates

Notes

Mr. Roberts has a long position in the common shares of SBC Communications and Verizon Communications.

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DRESDNER KLEINWORT WASSERSTEIN RESEARCH – RECOMMENDATION DEFINITION

(Except as otherwise noted, expected performance over next 12 months)

Buy	10% or greater increase in share price	Reduce	5-10% decrease in share price
Add	5-10% increase in share price	Sell	10% or more decrease in share price
Hold	+5%/-5% variation in share price		

H3819/02